

Statement of Basis

**Permit to Construct No. P-2015.0004
Project ID 61470**

**Darling Ingredients Inc.
Kuna, Idaho**

Facility ID 001-00108

Final

February 5, 2015
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The purpose of this Statement of Basis is to satisfy the requirements of IDAPA 58.01.01. et seq, Rules for the Control of Air Pollution in Idaho, for issuing air permits.

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ACRONYMS, UNITS, AND CHEMICAL NOMENCLATURE

AAC	acceptable ambient concentrations
AACC	acceptable ambient concentrations for carcinogens
acfm	actual cubic feet per minute
ASTM	American Society for Testing and Materials
BACT	Best Available Control Technology
BMP	best management practices
Btu	British thermal units
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CAS No.	Chemical Abstracts Service registry number
CBP	concrete batch plant
CEMS	continuous emission monitoring systems
cfm	cubic feet per minute
CFR	Code of Federal Regulations
CI	compression ignition
CMS	continuous monitoring systems
CO	carbon monoxide
CO ₂	carbon dioxide
CO ₂ e	CO ₂ equivalent emissions
COMS	continuous opacity monitoring systems
DEQ	Department of Environmental Quality
dscf	dry standard cubic feet
EL	screening emission levels
EPA	U.S. Environmental Protection Agency
FEC	Facility Emissions Cap
GHG	greenhouse gases
gph	gallons per hour
gpm	gallons per minute
gr	grains (1 lb = 7,000 grains)
HAP	hazardous air pollutants
HHV	higher heating value
HMA	hot mix asphalt
hp	horsepower
hr/yr	hours per consecutive 12 calendar month period
ICE	internal combustion engines
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
iwg	inches of water gauge
km	kilometers
lb/hr	pounds per hour
lb/qtr	pound per quarter
m	meters
MACT	Maximum Achievable Control Technology
mg/dscm	milligrams per dry standard cubic meter
MMBtu	million British thermal units
MMscf	million standard cubic feet
NAAQS	National Ambient Air Quality Standard
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO ₂	nitrogen dioxide
NO _x	nitrogen oxides
NSPS	New Source Performance Standards

O&M	operation and maintenance
O ₂	oxygen
PAH	polyaromatic hydrocarbons
PC	permit condition
PCB	polychlorinated biphenyl
PERF	Portable Equipment Relocation Form
PM	particulate matter
PM _{2.5}	particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers
PM ₁₀	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
POM	polycyclic organic matter
ppm	parts per million
ppmw	parts per million by weight
PSD	Prevention of Significant Deterioration
psig	pounds per square inch gauge
PTC	permit to construct
PTC/T2	permit to construct and Tier II operating permit
PTE	potential to emit
PW	process weight rate
RAP	recycled asphalt pavement
RFO	reprocessed fuel oil
RICE	reciprocating internal combustion engines
<i>Rules</i>	<i>Rules for the Control of Air Pollution in Idaho</i>
scf	standard cubic feet
SCL	significant contribution limits
SIP	State Implementation Plan
SM	synthetic minor
SM80	synthetic minor facility with emissions greater than or equal to 80% of a major source threshold
SO ₂	sulfur dioxide
SO _x	sulfur oxides
T/day	tons per calendar day
T/hr	tons per hour
T/yr	tons per consecutive 12 calendar month period
T2	Tier II operating permit
TAP	toxic air pollutants
TEQ	toxicity equivalent
T-RACT	Toxic Air Pollutant Reasonably Available Control Technology
ULSD	ultra-low sulfur diesel
U.S.C.	United States Code
VOC	volatile organic compounds
yd ³	cubic yards
µg/m ³	micrograms per cubic meter

FACILITY INFORMATION

Description

Darling Ingredients Inc. is a food processing by-products recycler processing approximately two million pounds of material per week. This material includes slaughterhouse offal, shop fat and bone, dead animal stock, and restaurant grease. The solid material is trucked to the facility, dumped into a receiving pit, and transported to an auger or a hog for size reduction. After crushing, the material is cooked in steam heated cookers. Steam heat is provided by the Superior and Kewanee boilers. The solid and liquid products are separated by screens with the solid material being processed into meat and bone meal. The liquid product is separated from the solid material by centrifuge. The tallow is stored in steam heated tanks. The restaurant grease is screened to remove the solids. The solids are processed as stated above while the yellow grease is stored in tanks. Both tallow and yellow grease can be used as fuel for the Superior boiler. All products manufactured at the facility are sold in the non-ruminant animal feed market.

Permitting History

The following information was derived from a review of the permit files available to DEQ. Permit status is noted as active and in effect (A) or superseded (S).

April 25, 2002 001-00108, allowing combustion of grease and tallow in existing Superior boiler, Permit status (S)

October 4, 2006 P-060003, addition of an existing natural gas-fired Kewanee boiler. Permit status (A, but will become S upon issuance of this permit)

Application Scope

This PTC is a revision of an existing PTC for a facility name change.

Application Chronology

January 12, 2015 DEQ received an application.

February 5, 2015 DEQ issued the final permit and statement of basis.

TECHNICAL ANALYSIS

Emissions Units and Control Equipment

Table 1 EMISSIONS UNIT AND CONTROL EQUIPMENT INFORMATION

Sources	Control Equipment
Superior Boiler Manufacturer: Superior Boiler Works Model: 6-X-5000-5I50-1CCF-GA-2 boiler Heat input rate: 41.84 MMBtu/hr Fuel: natural gas, no. 2 fuel oil, yellow grease or tallow Constructed date: 1997	None
Kewanee Boiler Manufacturer: Kewanee Boiler Corporation Heat input rate: 31.38 MMBtu/hr. Fuel: natural gas fired Constructed date: 1974	None

Emissions Inventories

This permitting action is for a facility name change. Emissions inventories are not required.

Ambient Air Quality Impact Analyses

This permitting action is for a facility name change. Ambient air quality impact analyses are not required.

REGULATORY ANALYSIS

Attainment Designation (40 CFR 81.313)

The facility is located in Ada County, which is designated as attainment or unclassifiable for PM_{2.5}, PM₁₀, SO₂, NO₂, CO, and Ozone. Refer to 40 CFR 81.313 for additional information.

Facility Classification

Darling Ingredients Inc. is classified as a minor facility because the facility’s potential to emit is less than major source thresholds without requiring limits on its potential to emit. The classification is B.

Permit to Construct (IDAPA 58.01.01.201)

IDAPA 58.01.01.201 Permit to Construct Required

The permittee has requested that a PTC be issued to the facility for a facility name change. Therefore, a PTC is required to be issued in accordance with IDAPA 58.01.01.220. This permitting action is processed in accordance with the procedures of IDAPA 58.01.01.200-228.

Visible Emissions (IDAPA 58.01.01.625)

IDAPA 58.01.01.625 Visible Emissions

The sources of PM₁₀ emissions at this facility are subject to the State of Idaho visible emissions standard of 20% opacity. This requirement is assured by Permit Conditions 2.4 and 3.4.

Standards for New Sources (IDAPA 58.01.01.676)

IDAPA 58.01.01.676 Standards for New Sources

The fuel burning equipment located at this facility, with a maximum rated input of ten (10) million BTU per hour or more, are subject to a particulate matter limitation of 0.015 gr/dscf of effluent gas corrected to 3% oxygen by volume when combusting gaseous fuels and 0.050 gr/dscf of effluent gas corrected to 3% oxygen by volume when combusting liquid fuels. Fuel-Burning Equipment is defined as any furnace, boiler, apparatus, stack and all appurtenances thereto, used in the process of burning fuel for the primary purpose of producing heat or power by indirect heat transfer. This requirement is assured by Permit Conditions 2.5 and 3.5.

Title V Classification (IDAPA 58.01.01.300, 40 CFR Part 70)

IDAPA 58.01.01.301 Requirement to Obtain Tier I Operating Permit

The facility is a minor source and is not a Tier I source in accordance with IDAPA 58.01.01.006; the requirements of IDAPA 58.01.01.301 do not apply.

PSD Classification (40 CFR 52.21)

40 CFR 52.21 Prevention of Significant Deterioration of Air Quality

The facility is not a major stationary source as defined in 40 CFR 52.21(b)(1), nor is it undergoing any physical change at a stationary source not otherwise qualifying under paragraph 40 CFR 52.21(b)(1) as a major stationary source, that would constitute a major stationary source by itself as defined in 40 CFR 52. Therefore in accordance

with 40 CFR 52.21(a)(2), PSD requirements are not applicable to this permitting action. The facility is not a designated facility as defined in 40 CFR 52.21(b)(1)(i)(a) and does not have facility-wide emissions of any criteria pollutant that exceed 250 T/yr.

NSPS Applicability (40 CFR 60)

The Superior boiler is subject to 40 CFR 60, Subpart Dc. Refer to the statement of basis for the existing PTC issued on 10/4/2006. (2011AAG2451)

NESHAP Applicability (40 CFR 61)

The facility is not subject to any NESHAP requirements in 40 CFR 61.

MACT Applicability (40 CFR 63)

The facility is subject to 40 CFR 63, Subpart JJJJJ - National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources.

The Superior boiler is an industrial boiler as defined in 40 CFR 63.11237, is located at an area source of hazardous air pollutants (HAP), as defined in 40 CFR 63.2, and is not exempt under 40 CFR 63.11195; therefore, it is subject to this subpart. The Superior boiler belongs to Oil subcategories as listed in 40 CFR 63.11200 and defined in 40 CFR 63.11237. The Superior boiler was constructed in 1997, after June 4, 2010, and is therefore an existing source.

Because this is a minor source, the requirements of this subpart are not explicitly detailed out in the PTC.

Permit Conditions Review

This section describes only those permit conditions that have been added, revised, modified or deleted as a result of this permitting action.

SUPERIOR BOILER

Permit Condition 2.5

A minor correction is made to Permit Condition 2.5. "No. 2 fuel oil" is added to the permit condition as it was unintentionally missed. The revised Permit Condition 2.5 reads as follows:

"2.5 Grain Loading Limits

In accordance with IDAPA 58.01.01.676, the permittee shall not discharge to the atmosphere from any fuel-burning equipment with a maximum rated input of 10 MMBtu/hr or more, and commencing operation on or after October 1, 1979, PM in excess of 0.015 gr/dscf when burning gas or 0.050 gr/dscf when burning **No. 2 fuel oil**, yellow grease or tallow, both standards of which shall be corrected to 3% oxygen."

New Permit Condition 2.12

The facility is subject to 40 CFR 63, Subpart JJJJJ because the Superior boiler is an affected source for the subpart. New Permit Condition 2.12 states "**The permittee shall comply with 40 CFR 63, Subpart JJJJJ for the Superior boiler.**"

GENERAL PROVISIONS

As a result of using the most recent PTC template, permit condition numbering is changed. In addition, the new General Provisions from the current template is used.

PUBLIC REVIEW

Public Comment Opportunity

Because this permitting action does not authorize an increase in emissions, an opportunity for public comment period was not required or provided in accordance with IDAPA 58.01.01.209.04.